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AUTHOR	Dewalt, Mark W.; Vare, Jonatha W.; Dockery, E. Ray
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ABSTRACT

This study examined why students leave teacher education. It included 657 students from a comprehensive institution of higher education who took an entry-level education course in the fall or spring semester of 1998-1999 and 1999-2000. Researchers hypothesized that there would be a relationship among grade point average (GPA), scholastic assessment test (SAT) scores, and the likelihood of students remaining in teacher education. They also hypothesized that students' strength of initial commitment, learning preferences, and parents' educational level would influence their remaining in teacher education. Researchers collected data on students' high school GPA, college GPA, and SAT scores from university records. Students completed surveys which estimated initial commitment to teacher education and examined other issues. They also completed the Learning Type Measure, which assessed how they perceived and processed information. Students who did not continue in teacher education after the second semester completed brief telephone interviews. Results indicated that there was a relationship among GPA, SAT scores, and student retention in teacher education. There was also a relationship between learning preferences and retention. Students' strength of initial commitment did not predict retention. Though educational level and occupation of the mother did not predict retention, occupation of the father was a predictor. (Contains 31 references.) (SM)

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Mark W. Dewalt
Winthrop University

M.W. Dewalt

Jonatha W. Vare
Winthrop University

E. Ray Dockery
Winthrop University

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Retaining Teacher Candidates in the New American College

Theoretical Framework

A crisis in teacher quality and supply currently confronts teacher educators (Barkum, 1997; Boe, 1996; Darling-Hammond, 1997; Hardy, 1998; Ingersoll, 1994; U. S. Department of Education, 1998; Wilson and Pearson, 1993). Moreover, post-secondary institutions now contain more nontraditional, first-generation-to-college, working, commuting, and ethnically diverse students who challenge the traditional pattern of matriculation (Hodgkinson, 1996; Pacheco, 1994). New American Colleges, as conceptualized by Ernest Boyer and Frank Wong, offer one model for retention and support.

Compared to the "deficit" view that characterized remedial strategies of the past (Nieto, 2000), the New American College model views diversity as difference with potential. New American Colleges create an inclusive, integrated academic culture through student-centered assessment, faculty collaboration, and interdisciplinary learning (Berberet and Wong, 1995; Coye, D, 1997; Neff and Hetrick, 1994; Washbourn, 1996). Such colleges follow a "value-added" approach of assessing students' needs and planning ways to help students achieve their desired goals (Neff and Hetrick, 1994). This approach favors all students, not only those with prior access to the "cultural capital" (i.e., knowledge, goods, and educational qualifications) of dominant groups (Bourdieu, 1986). Adopting the New American College model, faculty who would like to retain diverse candidates for teacher education programs must begin with student-centered assessment. Planning appropriate retention efforts requires knowledge of students' characteristics and backgrounds. According to the literature, several factors may contribute to attrition from

teacher education in the first two years: failure to attain the requisite grade point ratio (GPA); low level of initial commitment; and mismatch between learning preferences of students and teaching styles of faculty. A brief discussion of each factor follows.

First, Wilk (1969) found that only grade point average contributed significantly to predicting retention. However, selected demographic variables may contribute to attaining the GPA required for retention. Level of education of the mother (Farmer and Chung, 1995; Lang, Dunham, and Alpert, 1988), the father (Pattnayak and Todorov, 1992), and both parents (Alwin and Thornton, 1984; McCartin and Meyer, 1988) significantly predicts academic achievement. Moreover, educational level of the parents also correlates with students' verbal ability (Alwin and Thornton, 1884). For nontraditional students, colleges need to design retention programs to assist at points early enough in their studies to help them attain the GPAs necessary for program entrance and completion. Working-class and especially ethnic minority, first-generation-to-college students are less likely to seek out advisors or other avenues of support available in higher education (Mehan, Villanueva, Hubbard, and Lintz, 1996; Pacheco, 1994); these students need specific proactive intervention. Other nontraditional students may need to master appropriate study habits and self-management techniques (Jenkins, 1981).

Second, research indicates that strength of initial commitment to teaching is a good predictor of program completion (Pigge and Marso, 1992). To accommodate wavering students, faculty can provide information to address concerns. For instance, students may want practical training related to a specific job rather than information that is broadly applicable to careers in general (Hodgkinson, 1996; Schroeder, DiTiberio, and Kalsbeek, 1989).

Third, a mismatch may exist between the learning preferences of students and the teaching styles of their professors. Learning styles, which are ways in which persons typically perceive and process information (Kolb, 1983), follow certain patterns of distribution in both general and college populations and correlate with academic aptitude, college achievement, and choice of major (Schroeder, 1993). Prior research shows differences in learning styles among college freshmen according to gender but not major and race (Matthews, 1991). Schroeder (1993) contends that today's college student's process learning in ways vastly different than the teaching styles preferred by professors. Some colleges have implemented retention programs to bridge the gap between professors' teaching styles and students' learning styles (Pacheco, 1994) and to help instructors incorporate information about learning preferences into their teaching techniques (Kelly, 1992).

Method

Researchers posed four hypotheses about why students leave teacher education. First, a relationship exists between students' SAT scores, their GPAs, and their remaining in teacher education. Students with higher SAT scores have higher GPAs and are more likely to remain in teacher education. Second, a relationship exists between a student's strength of initial commitment and their remaining in teacher education. Students with a higher degree of initial commitment are more likely to stay. Third, a relationship exists between students' learning preferences and their continuing in or leaving teacher education. Thinking/reflecting students are more likely to stay, and doing/reflecting students are more likely to leave. Fourth, a relationship exists between the occupation and educational level of student's parents and their remaining in teacher education. Students

whose parents have more education and white-collar jobs are more likely to stay.

Sample

The sample site was a comprehensive institute of higher education located in the southeastern United States. The sample for this study contained 660 students who took an entry-level education course in the fall or spring semester of the 1998-1999 and 1999-2000 academic years. Of the 660 students, 657 agreed to participate in the study. The sample site, a former normal school, is not a member of the Associated New American Colleges, but aspects of the institution, such as size and institutional ethos, match demographic features and membership criteria (Neff and Hetrick, 1994). The mean age for the group was 20, the average high school GPA was 3.3, the mean SAT-Q was 503, and the mean SAT-V was 512. Eighty-four percent of the students were female, and 16 % were male. About two percent were Native American, Hispanic, or Asian/Pacific Islander, 18 % were African American, and 76 % were White. Compared to data in a national report ("This Year`s Freshman," 1999), the study sample contains more African American students (18 % as compared to 9 % in the national sample) and fewer White students (76 % as compared to 83% for the national data). The students represent a variety of majors including elementary education (35%), early childhood education (16%), special education (9%), music (7%), physical education (4%), English (4%), mathematics (4%), and others (21% including art, biology, chemistry, dance, French, history, and Spanish).

Data Collection and Instrumentation

Data for this study were collected in several ways. Researchers obtained high school GPA, college GPA, and SAT scores from university records. Students completed surveys

to report other variables of interest and an estimate of initial commitment to teacher education. All students completed the Learning Type Measure (LTM), an instrument that assesses how a person perceives and processes information. The LTM contains quadrants numbered 1 (feeling/reflection), 2 (thinking/reflection), 3 (thinking/doing), and 4 (feeling/doing), and the highest score in a quadrant indicates a person's preferred learning style.. A technical manual by McCarthy and St. Germain (1996) documents evidence about the validity and reliability of the LTM. The manual reports Cronbach alpha coefficients for the four learning type quadrants ranging from 0.767 to 0.885 and a test-retest statistic of .71. Fourth, a research contacted a brief follow-up telephone interview with students who did not continue in teacher education after the second semester. The researchers also documented the reliability of the LTM by using 316 students in the 1998-1999 cohort of the sample, researchers found that Cronbach alpha coefficients for the four LTM quadrants ranged from .68 to .71.

Results

The average GPA for university students in the sample was 2.73 with a range of 0.0 to 4.0. Fifty-six percent of the students were quadrant 1 learners (feeling/reflection), 10% were quadrant 2 (thinking/reflection), 13% were quadrant 3 (thinking/doing), and 20% were quadrant 4 (feeling/doing). Multiple regression analysis identified five variables as predictors of GPA: SAT-V and SAT-M scores, high school GPA, educational level of the father, and score on quadrant 2 (thinking/reflection) of the LTM. The multiple r was .64 with an adjusted r square of .40 ($p < .000$). There was no significant difference in scores on the LTM by race or ethnicity, although significant differences existed by major and gender. Hypothesis 1 was confirmed. The Pearson correlation between GPA and SAT-V

score was .51, p = .000. In addition, the correlation with SAT-M was .43, p = .000. Hypothesis 2 was not supported. The correlation between degree of initial interest in teaching and remaining in teacher education was not significant. Hypothesis 3 was confirmed. The Pearson correlation between "thinking/reflection" LTM scores (Quadrant 2) and GPA was .16, p = .001. Hypothesis 4 was partially supported. The Spearman correlation between father's educational level and spring GPA was .15, p = .000. However, Spearman correlations between GPAs and occupation of the father, occupation of the mother, and level of the mother's education were not significant.

Researchers also attempted to discover the reasons students withdraw from the university, and/or withdraw from the teacher education program. During the first year of study many students withdrew from the university because of low GPA's. In some cases students were placed on academic leave. It was also evident that some students withdrew from teacher education because of low GPA's. Some students had a genuine desire to change majors while others had a genuine desire to matriculate at another university. There were also several students that withdrew because of family or health issues. Finally, some students withdrew for financial reasons. For example, one student in the sample lost an athletic scholarship.

Conclusions and Discussions

Appropriate assessment and planning are two hallmarks of student-centered education in the New American College model (Neff and Hetrick, 1994). Varied explanations exist for student's retention in teacher education as determined by whether they meet the GPA required to continue. Variables such as verbal aptitude, composite learning style, and level of father's education may be more important to learn about

students than degree of initial commitment to teaching as a career or gross demographic indicators of gender, social class, and race or ethnic background. Faculty and collaborative partners should coordinate assessment with retention programs closely tailored to the needs shown by various subgroups within the student population. The freshman year is a particularly crucial one, and proactive intervention should begin prior to scheduling or taking classes. Pre-advising during the summer should occur.

Entering students with lower verbal ability may need assistance in study skills and areas of academic instruction. Post-secondary and secondary school personnel should collaborate to identify entering students with lower SAT-V scores and lower high school GPAs who are likely to encounter difficulty with college grades in the fall or first semester of their initial year. General education and teacher education faculty should know in advance which students might need supportive intervention efforts. Such efforts could include special advisors, sessions to teach skills (studying, reading, and writing), and mid-semester grade reports.

First-generation college students may require different forms of assistance such as special advising sessions to discuss unfamiliar processes. In this research, the higher educational levels of fathers are correlated with student's higher grades, indicating that the study's sample may contain many first-generation college students who have lower GPAs. Of the 657 students in the 1998-1999 and 1999-2000 cohort years of the sample, 202 students (31%) had fathers who did not attend college. Prior research indicates that first-generation college students often lack knowledge about the academic and social skills required for success in post-secondary education (Mehan et al., 1996). Collaborative secondary/post-secondary retention efforts should offer special programs

that provide access to knowledge about how to succeed in college to those students whose families may be less familiar with such information.

Finally, students may perform better when instruction matches their preferred learning styles. According to this study, students whose learning style preferences are quadrants 1, 3, and 4 are at greater risk for lower GPAs. In contrast, predictive significance of the quadrant 2 score validates Kolb's (1983) theoretical conception of learning style. According to McCarthy's revision of Kolb's learning style construct, quadrant 2 learners should be the most successful academically in traditional scholarly environments (McCarthy and St. Germain, 1996). They meet the notion of stereotypical students who perceive information abstractly, process it reflectively, learn by thinking through concepts, value ideas, and enjoy lecture and theory. Of the four types of learners depicted in LTM scores, the quadrant 2 learning style most closely matches a traditional teaching style characterized by lecture, an emphasis on theoretical concepts, a verbal mode of information processing, and abstract, analytical thinking. Both general education and teacher education faculty can and should receive appropriate professional development. Faculty can learn how to design teaching practices to accommodate the varied learning styles preferred by a majority of their students. Concomitantly, universities can offer students counseling about their own preferred learning styles and information about ways to adapt to professors varied teaching practices. In addition, students whose dominant learning preferences are quadrants 1, 3, and 4 should benefit most from the New American College practice of connecting general and professional studies with practical, vocational skills.

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